Specific Water Board Staff Comments Regarding Draft Salinas Stormwater Development Standards (SWDS), December 2007

Prepared as follow up to Water Board general staff comments in letter dated April 2, 2008, and presented with an excerpt of Permit Attachment 4, highlighting requirements that are apparently missing from the SWDS

SWDS Section	Excerpt	Staff Comment
1	"The standards integrate required stormwater water quality runoff, flood control, and channel/stream bank erosion considerations into one set of design criteria for storm water handling in development design."	This statement could be improved by clarifying that the standards are intended to ensure hydrology and stormwater quality are integrated into the early planning of development and community design and are not just "design criteria for stormwater handling in development design."
1	"Section 2 provides a general discussion on Low Impact Development (LID) planning techniques that shall be considered in the preliminary design phase of new development projects."	Good example of early planning language.
1.1	"No land owner or land operator shall receive any building, grading, or other land development permits required for land disturbance activities without first meeting the requirements of these City of Salinas Stormwater Development Standards prior to commencing the proposed activity."	These two statements are good in that they require a concept plan, but could be improved by clarifying that the concept plan be submitted during the planning and zoning permit process, when the City has discretion to affect the project.
	Section 1.1.2: "a permit application must be accompanied by the following documents in order for the permit application to be considered: a stormwater management concept planThe stormwater management concept plan shall show how the applicant intends to comply with the City's Low Impact Development stormwater planning requirements."	
1.2.1	"Overall, stormwater management practices for development shall rely on a "tiered" approach. The first tier shall be planning and site design measures to minimize stormwater runoff. The second tier shall be site source control measures the minimize or eliminate stormwater contamination. The third tier will be stormwater treatment controls using Low Impact Development techniques"	could be improved by emphasizing that the first tier shall be planning and site design measures to avoid natural drainage features, minimize topography changes, and mimic natural hydrology – not just "minimize stormwater runoff."
1.1.5	"Waivers for Providing Stormwater Management. If after	See Permit Attachment 4, Section III.E. "Any proposed waiver

SWDS		Staff Comment
Section	assessement by the City Engineer, conditions of the applicant's project are such that compliance is infeasible, the applicant may apply for a waiver of these provisions. Such a waiver will only be considered after all appropriate means for compliance are reviewed. The City Engineer shall use the Maximum Estent Practicable (MEP) criteria for the evaluation of the waiver request. The waiver shall be granted only for aspects of the these standards which are deemed infeasible – all other requirements are still applicable.	program shall be subject to the approval of the Executive OfficerThe Permittee shall only grant a waiver when all appropriate structural treatment BMPs have been considered and rejected as infeasible. The Permittee shall notify the Regional Board within one month of each waiver issued and shall include the name of the person granting each waiverAt a minimum, a proposed waiver program shall identify the following:  iv. The entity or entities that will manage (i.e., assume full responsibility for) the storm water mitigation fund;
	If granted a waiver, the applicant shall pay into a City Stormwater Mitigation Fund at the rate of 135% of the estimated construction savings."	<ul> <li>iv. The range and types of acceptable projects for which mitigation funds may be expended;</li> <li>iv. The entity or entities that will assume full responsibility for each mitigation project, including its successful completion; and</li> <li>iv. How the dollar amount of fund contributions will be determined and managed."</li> <li>This program is not approvable by the Executive Officer. This draft language does not require a demonstration that "all appropriate structural treatment BMPs have been considered and rejected as infeasible." This language does not indicate whether the City intends to notify the Regional Board of approved waivers as required. The proposed program does not indicate the entity or entities that will manage the stormwater mitigation fund, the range and type of projects for which mitigation funds may be expended, the entities that will be responsible for each project, or how the</li> </ul>
2.1	"LID practices that mimic a site's predevelopment hydrology can be accomplished by implementing the following"  "Protecting natural drainage features and incorporating them in the site design is highly desirable."	dollar amount of fund contributions will be determined and managed.  Section 2 is a good general discussion of what LID is, but the language in these excerpts is unclear what is required vs. suggested. This unclear language pervades Sections 2.0 through 2.4. This section must be rewritten as standards.

SWDS		
Section	Excerpt	Staff Comment
	"LID strives to preserve particularly high value open space areas such as wetlands, natural riparian corridors and soils with good groundwater recharge potential. LID also strives to minimize the amount of land disturbance to only those areas necessary for construction of structures"	
2.3	"LID storm water management techniques, when implemented in the planning phase of new and redevelopment projects, can have the greatest relative impact on reducing the rate, volume, and pollutant loading of urban runoff."	
2.4	"To be successful, LID planning principles for the protection of local water resources should consist of the following strategies"	
2.1 (p 2-4)	"LID is one of several new urban planning techniques. It differs from other techniques such as "Smart Growth" and "Sustainable Development" in that LID is primarily focused on alternative storm drainage techniques."	Improve this statement by clarifying that LID is compatible with Smart Growth.
3	This chapter discusses LID designs and practices. Prefacing this chapter is a description of the Maximum Extent Practicable (MEP) standard. Page 3-2 states: "The City of Salinas requires controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods."	This discussion of MEP is unclear if the practices described in this section meet the MEP standard. Improve this statement by adding language such as "All of the following LID practices, if properly designed and incorporated into a development, meet the MEP standard."
4	This chapter is titled "Storm Water Design Considerations." Section 4.0 is titled "BMP Design and Selection Guidance," and states, "The following sections provide summarized information to assist planners and designers with the selection of appropriate LID practices and structural treatment control BMPs for proposed project sites. The BMP Design and Selection Matrices in the following section summarize a number of factors that should be considered when selecting LID practices and structural treatment control BMPs"	These are stormwater development standards, not suggestions. Retitle this section "Stormwater Design Standards," and retitle Section 4.0 "BMP Design and Selection Requirements." Rewrite this statement with language such as, "The following sections summarize information that planners and designers must consider when selecting appropriate LID practices and structural treatment control BMPs for proposed project sites. The BMP Design and Selection Matrices in the following section must be followed when selecting LID practices and structural treatment control BMPs."

SWDS Section	Excerpt	Staff Comment
4.4	"Bioretention System Design Criteria. If a bioretention system is proposed as part of a development strategy to reduce the rate, volume and pollutant loading of urban runoff, the following design criteria should be applied"	This is an example of weak language that pervades Chapter 4. The word "should" suggests that its optional, when it really isn't. Rewrite this statement, "the following design criteria must be applied" Make similar revisions throughout Chapter 4.
5.1	"The storm drainage system shall follow natural drainage patterns as much as possible, within the constraints of the development needs and City requirements."	Good statement, but such requirements must be measurable and enforceable (see our April 2, 2008 letter). For example, "For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed)and ensure that post-project time of concentration is equal or greater than pre-project time of concentration."
5.1	"Storm drainage facilities for excess flows from new development tributary to the creeks or to detention/retention areas shall typically be reinforced concreteThe storm drain segment from ditch/creek/river to first junction structure must be concrete for stability purposes. Drainage ditches or open channel conveyance shall only be used if approved by the City Engineer."	Please clarify, does this only apply to overflow structures from detention/retention systems? If LID is properly incorporated into development, such infrastructure should not be necessary.
5.6	"New development and redevelopment shall provide stormwater detention or retention to mitigate increases in stormwater discharges. This shall be done only after stormwater runoff volume minimization using planning techniques such as minimization of impervious surfaces and Low Impact Development requirements of the City have been implemented."	Good statement, but aren't stormwater detention or retention systems redundant if LID is properly incorporated into a development? This is part of the reason why studies have shown that LID is generally less expensive than conventional development.

this Order, or otherwise deems the site to pose an immediate and significant threat to water quality, the Permittee shall provide oral notification to the Regional Board within five (5) business days of such determination. Such oral notification shall be followed by written notification within ten (10) business days of the incident.

For construction sites requiring coverage under the General Construction Permit, the Permittee shall refer non-filers (i.e., those projects that cannot demonstrate that they have submitted an NOI or received a WDID number) to the Regional Board within ten (10) business days of discovery. In making such referrals, the Permittee shall include, at a minimum, the following information:

- Project location;
- Developer:
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Salinas Stormwater Development

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construction inspection and plan forces starry regarding the requirements of this Order. This training shall include erosion and sediment control installation and maintenance techniques, inspection procedures, enforcement procedures, and information on the requirements in the General Construction Permit including elements in an effective SWPPP.

## III. Development Standards Component

- a. The Permittee shall minimize the short and long-term impacts on receiving water quality from new development and significant redevelopment. In order to reduce pollutants in runoff flows from these sources to the MEP, the Permittee shall review and update its existing program, which shall, at a minimum, address the following:
  - i. The Permittee shall incorporate water quality and watershed protection principles into planning procedures and policies such as: the General Plan or equivalent plans (e.g., Comprehensive, Master, Community, and/or Specific Plans) to direct land use decisions and require implementation of consistent water quality protection measures for all development projects. Such water quality and watershed protection principles and policies shall consider the following:
    - 1. Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and use on-site infiltration of runoff in areas with appropriate soils where the infiltration of storm water would not pose a potential threat to groundwater quality.

- 2. Implement pollution prevention methods supplemented by pollutant source controls, and if source controls are not practicable, by treatment controls. Where practical, use strategies that control the sources of pollutants or constituents to minimize the transport of storm water and pollutants offsite and into MS4s.
- 3. Preserve and, where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands and buffer zones.
  - 4. Limit disturbances of natural water bodies and natural drainage systems caused by development within Permittee's jurisdictional authority, including roads, highways, and bridges.
    - 5. Require developers to prepare and submit studies analyzing pre- and postproject pollutant loads (including sediment) and flows resulting from projected future development. Require incorporation of structural and nonstructural BMPs to mitigate the projected increases in pollutant loads in runoff.
  - 6. Identify, minimize, and regulate development in areas that are particularly susceptible to erosion and sediment loss, or establish development guidance that protects areas from erosion and sediment loss.
    - 7. Implement source and/or treatment controls as necessary to protect downstream receiving water quality from increased pollutant loads in runoff flows from new development and significant redevelopment.
  - 8. Control the post-development peak storm water run-off discharge rates and velocities to prevent or reduce downstream erosion, and to protect stream habitat.
  - ii. Prior to project approval and issuance of local permits for new development and significant redevelopment, the Permittee shall review the proposed project plan and require measures to ensure that all development is in compliance with the Permittee's storm water ordinances, local permits, and other applicable requirements.
- b. Development Standards Plan. Within 1 year of permit adoption, the Permittee shall develop and submit for public review and comment and Executive Officer approval, a Development Standards Plan (DSP) that describes measures to reduce pollutant discharges to the MEP from all new development and significant redevelopment projects. Public review and comment will include a 30-day posting to the Regional Board website, with notification to interested parties of the draft's availability. Public comments must be addressed to the satisfaction of all prior to Executive Officer

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approval. If comments cannot be satisfactorily addressed informally, then the public may request a hearing before the Regional Board on this issue.

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The DSP must be consistent with the applicable portions of State Board Order WQ 2000-11. To ensure consistency with Order WQ 2000-11, the DSP shall provide the following information:

- i. A description of existing Development Standards, if any, including project categories, BMP requirements and numeric sizing criteria;
- ii. A comparison of existing development standards to the requirements established under State Board Order WQ 2000-11 and/or other applicable directives; and
- iii. A description of the proposed modifications to the Development Standards to ensure that, at a minimum, they are consistent with the requirements of State Board Order WQ 2000-11 and this Order.

Within one year of approval of the DSP, the Permittee shall amend, or adopt if needed, its own local Development Standards, including amendment of ordinances as needed.

- c. Review of Plans. Upon amendment or adoption of local Development Standards, the Permittee shall ensure that all new development and significant redevelopment projects falling under the priority project categories listed below are reviewed and conditioned for compliance with the Development Standards. The local Development Standards shall apply to all priority projects or phases of priority projects that do not have approval by the City Engineer, permit for development or construction, an approved special permit, or an approved tentative map by the adoption date for the local Development Standards. Development Standards shall apply as follows:
  - i. Priority Development Project Categories: Development Standards requirements shall apply to all new development and significant redevelopment projects within the Permittee's jurisdictional authority and falling under the priority project categories listed below. The term "significant redevelopment" is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Significant redevelopment includes, but is not limited to expansion of a building footprint, or replacement of a structure; replacement of impervious surface that is not part of a routine maintenance activity; and land-disturbing activities related to structural or impervious surfaces. Where significant redevelopment results in an increase of less than 50 percent of the impervious surfaces of a previously existing development, and the existing development was not subject to Development Standards, the BMP design standards discussed below apply only to the addition, and not to the entire development. Priority Development Project Categories are listed below.

- 1. Home subdivisions with ten housing units or more. This category includes single-family homes, multi-family homes, condominiums, and apartments.
- 2. Commercial developments. This category is defined as any development on private land that is not for heavy industrial or residential uses where the impervious land area for development is 100,000 square-feet or more. The category includes, but is not limited to hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, commercial nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses, and other light industrial facilities.
- 3. Automotive repair shops. This category is defined as a facility that is categorized by one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539, where the total impervious area for development is 5,000 square feet or more.
- 4. Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812) and has 5,000 or more feet of impervious area.
- 5. Hillside developments 5,000 square feet or more of impervious area. This category is defined as any development that creates 5,000 square feet of impervious surface in an area with known erosive soil located in an area with natural slopes having a twenty-five percent or greater grade.
- 6. Parking lots exposed to rainfall that are 5,000 square feet or more, or with 25 or more parking spaces. This category is defined as an uncovered impervious area for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
- 7. Street, roads, highways, and freeways. This category includes any paved surface five acres or greater used by automobiles, trucks, motorcycles, and other vehicles.
- 8. Retail Gasoline Outlets. "Retail Gasoline Outlet" is defined as any facility engaged in selling gasoline with 5,000 square feet or more of impervious surface area.
- ii. BMP Requirements: The Development Standards Plan shall include a list of recommended source and/or structural treatment control BMPs for all new development and significant redevelopment projects falling under the above

priority project categories or locations. At a minimum, Retail Gasoline Outlets shall be required to use the BMPs listed in the California Storm Water Quality Task Force, March 1997 BMP Guide for Retail Gasoline Outlets.

- iii. Numeric Sizing Criteria: As a part of the DSP, the Permittee shall review their existing numeric sizing criteria for structural treatment BMPs and ensure that it is comparable to the following numeric sizing criteria:
  - 1. Volume-based BMPs shall be designed to mitigate (infiltrate or treat) either:
    - a) The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record; or
    - b) The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or
    - c) The volume of annual runoff based on unit basin storage volume, to achieve 80 percent or more volume treatment by the method recommended in the California Stormwater Best Management Practices Handbook New Development and Redevelopment, (2003).
  - 2. Flow-based BMPs shall be designed to mitigate (infiltrate or treat) either:
    - a) The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
    - b) The maximum flow rate of runoff, as determined from local historical rainfall records, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.
- iv. Equivalent Numeric Sizing Criteria: The Permittee may develop or use any equivalent numeric sizing criteria or performance-based standard for post-construction structural treatment BMPs as part of these requirements. Such equivalent sizing criteria may be authorized for use in place of the above criteria. In the absence of an equivalent numeric sizing criteria, the criteria contained above shall be implemented.
- v. Pollutants and Activities of Concern: The DSP shall consider pollutants of concern or activities of concern in identifying appropriate BMPs for new

development or significant redevelopment projects. In selecting BMPs, the following shall be considered: (1) the target pollutants; (2) land use and pollutants associated with that land use type; (3) pollutants expected to be present on site at concentrations that would pose potential water quality concerns; and (4) changes in flow rates and volumes resulting from the development project and sensitivity of receiving waters to changes in flow rates and volumes.

- vi. Implementation Process: The DSP shall describe the process used to implement the Development Standards and all proposed modifications to the process. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing these standards, as well as any other measures necessary for the implementation of these standards.
- vii. Infiltration and Groundwater Protection: To protect groundwater quality, the Permittee shall apply restrictions to the use of structural BMPs designed to primarily function as infiltration devices (such as infiltration trenches and infiltration basins). Such restrictions shall ensure that the use of such infiltration structural treatment BMPs shall not cause a violation of applicable groundwater quality standards.
- viii. Downstream Erosion: The DSP shall include any existing criteria or proposed modifications to ensure that discharges from new development and significant redevelopment address the potential for downstream erosion and protect stream habitat. At a minimum, the Permittees' Development Standards process shall consider the need for measures to control peak storm water discharge rates and velocities in order to protect downstream erosion and stream habitat. Storm water discharge volumes and durations should also be considered in the Development Standards.
- ix. Waiver Provision: The Permittee may provide for a project to be waived from the requirement of implementing structural treatment BMPs if infeasibility can be established as described below.
- x. Conflicts with Local Practices: The DSP shall include a description of necessary modifications to existing codes and ordinances and an implementation schedule for these modifications.
- d. Regional Storm Water Mitigation Program: The Permittee may apply to the Regional Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for Development Standard requirements. Upon review and a determination by the Executive Officer that the proposal is technically valid and appropriate, the Regional Board may consider for approval such a program if its implementation will:

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- i. Result in equivalent or improved storm water quality;
- ii. Protect stream habitat;
- iii. Promote cooperative problem solving by diverse interests;
- iv. Be fiscally sustainable via secured funding; and
- v. Be completed in five years, including the construction and start-up of treatment facilities.

Nothing in this provision shall be construed as to delay the implementation of Development Standard requirements as required by this Order.

- e. Waiver Program: Anytime during the term of the Order, the Permittee may propose a waiver program that would require any developers receiving waivers to transfer the savings in cost, as determined by the Permittee, to a storm water mitigation fund. Any proposed waiver program shall be subject to the approval of the Executive Officer. The Permittee may consider a waiver for projects where structural treatment BMPs are infeasible. The Permittee shall only grant a waiver when all appropriate structural treatment BMPs have been considered and rejected as infeasible. The Permittee shall notify the Regional Board within one month of each waiver issued and shall include the name of the person granting each waiver. Funds may be used for projects to improve urban runoff quality within the watershed of the waived project. At a minimum, a proposed waiver program shall identify the following:
  - i. The entity or entities that will manage (i.e., assume full responsibility for) the storm water mitigation fund;
  - ii. The range and types of acceptable projects for which mitigation funds may be expended;
  - iii. The entity or entities that will assume full responsibility for each mitigation project, including its successful completion; and
  - iv. How the dollar amount of fund contributions will be determined and managed.
- f. Maintenance Agreement and Transfer: The Permittee shall require that all developments subject to Development Standards and site specific plan requirements provide verification of maintenance provisions for post-construction structural and treatment control BMPs. Verification shall include one or more of the following as applicable:
  - i. The developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; or
  - ii. Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; or

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- iii. Written text in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control BMPs, or
- iv. Any other legally enforceable agreement that assigns responsibility for maintenance of structural or treatment control BMPs.
- g. California Environmental Quality Act Document Update: The Permittee shall incorporate into its CEQA process, within one year of the effective date of this Order, procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents. procedures shall require consideration of the following:
  - i. Potential impact of project construction on storm water runoff:
  - ii. Potential impact of project post-construction activity on storm water runoff;
  - iii. Potential for discharge of storm water from material storage areas, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas:
  - iv. Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit;
  - v. Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies;
  - vi. Potential for significant changes in the flow velocity or volume of storm water runoff that can cause environmental harm; and
  - vii. Potential for significant increases in erosion of the project site or surrounding areas.

## h. General Plan Update: The Permittee shall do the following:

- i. Evaluate and amend, revise, or update as necessary, its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended: land use, housing, conservation, and open space.
- ii. Provide the Regional Board with the draft amendment or revision when a listed General Plan element or the General Plan is noticed for comment in accordance with California Government Code § 65350 et seg.
- i. Targeted Employee Training: The Permittee shall provide annual training for its employees in targeted positions (whose jobs or activities are engaged in development planning), regarding the requirements of this Order that affect development planning.

## i. Technical Guidance and Information for Developers

- i. The Permittee shall make Development Standards available to developers as they are adopted/approved.
- ii. Within one year of adopting Development Standards, the Permittee shall make available in hardcopy and in addition may post on its website, new or amended technical guidance materials to the development community in the Permittee's jurisdiction for the siting and design of storm water quality BMPs. The technical material(s) shall at a minimum include:
  - 1. Source and treatment control BMP design criteria for BMPs acceptable for use in the local area;
  - 2. Peak flow control criteria to control peak discharge rates, velocities and duration in conformance with the numeric sizing criteria selected under C.5.c.iii above:
  - 3. Expected pollutant removal performance ranges for the BMPs (or references to national databases, technical reports and/or scientific literature); and
  - 4. Maintenance considerations.

## IV. Commercial/Industrial Facilities Component

The Permittee shall develop and implement a commercial/industrial discharge management program to reduce to the MEP the discharge of pollutants from certain commercial and industrial operations within its jurisdiction. At a minimum, the program shall include:

- a. Identify and inventory all industrial facilities and activities. By the end of the first year of the permit, the Permittee shall develop an inventory of all industrial facilities and activities that discharge to its MS4. The inventory shall include the facility name, address, nature of business or activity, SIC code(s) that best reflect the principal facility product or service, principle storm water contact, and whether statewide General Industrial Permit coverage has been obtained. At a minimum, the inventory shall include:
  - Municipal landfills (open and closed)
  - o Hazardous waste recovery, treatment, storage and disposal facilities
  - o Facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023
  - o Facilities subject to the statewide General Industrial Permit